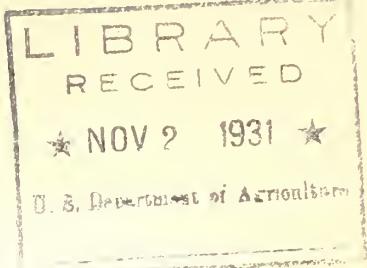


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STEM RUST AND BARBERRY NEWS

Issued by

Division of Barberry Eradication

Volume II

October 15, 1931

Number 12

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Bureau of Plant Industry  
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## INDEX

|  |     |
|--|-----|
| The Sioux Falls Project - - - - -            | 121 |
| Intensive Educational Work in Iowa - - - - - | 126 |
| Eastern Region - - - - -                     | 129 |
| Western Region - - - - -                     | 132 |
| Travel to Schools - - - - -                  | 134 |

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THE SIOUX FALLS PROJECT

By George M. Frandson, Agent in South Dakota

Cooperation is the keynote for the successful completion of the barberry eradication program. It is often noted that the public in general may be divided into three groups, namely; (1) those who are not in favor of barberry eradication for one reason or another, (2) those who apparently are indifferent, and (3) those who are interested and willing to help the progress of the campaign. The latter group are the real cooperators and are the ones particularly interested in the destruction of every harmful barberry.

It is not the purpose of this report to list the names of the many valuable helpers of the eradication campaign, but particular mention is made of the work which has been done by Mr. E. H. Bissell, a science teacher in Washington High School, Sioux Falls, South Dakota. While Mr. Bissell was an instructor at Tyndall, South Dakota, in 1929, his cooperation was received in presenting barberry educational material to his classes. Some time after accepting a position in Sioux Falls, a city of approximately 35,000 inhabitants, he conceived the idea of launching a project which would aid in locating barberry bushes in that city.

Preparation for, Organization of, and Launching the Project

The general science group consisted of approximately 400 boys and girls of ninth grade rating. These pupils received classroom instruction from Mr. Bissell and his co-teachers - Mr. H. E. Thurston, Mr. R. C. Zaleski, and Mr. W. J. Hines, in regard to the relationship of common barberry bushes to black stem-rust. The material was presented in a manner in which the students became actively interested.

The two-reel film entitled "Rust" was shown the classes this year upon the suggestion of the teachers, and aided greatly in the instructional side of the project. Several plantings were reported by the enthusiastic youngsters, before any definite scheme of organization was started.

During the spring of 1931, Mr. Bissell again became actively engaged in the work and continued to utilize the educational material. However, closer organization seemed necessary in order to insure a more thorough survey. The organization initiated found a place by virtue of the project plan in which the instructor is a firm believer.

"It has been recognized for years that if the pupil could be taught to study and gain knowledge upon his own initiative his education would be far more effective and lasting. I know of nothing that will put a student upon his own initiative like the project method where the student is given a particular piece of work which he must do upon his own resources. If this project can be in the line of some worth while service as well as educational, so much the better. In the plotting of the trees and shrubs of our city which was but one of the numerous voluntary projects taken up by the Science classes, the pupils not only acquired an abundance of information for themselves, but also did their bit in helping to eradicate the common barberry. The cooperation of the Division of Barberry Eradication in showing slides and giving medals to all those who found the harmful shrub added a great deal of enthusiasm to a project of this nature."

The project method as applied to general science called for a total of 15 points to be earned each six-weeks period of a semester. These points were to be earned by the student aside from the ordinary six-week and semester grade before he received the final passing mark. By gaining the approval of the high school principal, Mr. W. I. Early, and also by receiving the sanction of the city mayor, Mr. Bissell then included barberry survey as a means by which students could acquire project points. In the spring before plants began to leaf in general, instructional work started and the desire of the students to be outside earning points became evident. Field trips were then necessary in order to explain the project and familiarize the students with trees and shrubs.

#### The Project

Aside from locating and reporting common barberries in Sioux Falls, other steps were included to assist in increasing the knowledge of the students in regard to plant life. Each surveyor was supplied with a sheet upon which was drawn an outline of a representative city block. Above this sketch was a list of the most commonly grown trees of the city and a similar

list pertaining to shrubs. The block assigned to the young hunters was to be carefully sketched showing the approximate location and the name of every tree and shrub growing on it. Two students were assigned to survey one block; two another, etc.

As the block was being worked the surveyors were asked to wear "Rust Buster" badges in order that their motive would be revealed to inquisitive residents. News articles published in the Sioux Falls Daily Argus Leader also informed the people that the young folks would pay them a visit and that there was no ulterior motive behind their plan of survey.

When an assignment was completed, the sketch and data were compiled and a certain number of project points were awarded the hunters. The number of points presented varied considerably with the type of block worked since some were more heavily wooded than others. An additional assignment was made at this time provided the surveyors desired to continue the work.

In case a student chose to earn his points by producing some home-made scientific article, no systematic search for barberries was made on his part. However, any student, whether engaged in the survey activity or not, would receive a total of 15 project points should he find and report a planting of common barberries. This number of points was the equivalent of that required for one six-weeks period. The possibility of receiving these points had a tendency to keep the student on the lookout at all times and more especially when he was in need of project points. During the spring months of 1931 approximately 100 boys and girls combined their efforts in the intensive search. The check sheets designed and prepared by Mr. Bissell were handed to the hunters as they received their assignment. Upon the completion of the block and the return of the check sheet, the area was marked off on a master map of the city. New check sheets were presented as the student received his next assignment.

The check sheets were filed as they were returned to the instructor. Interesting and possibly valuable information may be received upon the compilation of data pertaining to the number and kinds of trees and shrubs grown in Sioux Falls.

#### Awards and Incentives

It is a human characteristic to desire to do, provided one received payment for doing. What one receives, to a large extent, determines his desire to further engage in industry.

In connection with the project the student was awarded project points in proportion to the services he rendered. The more territory he surveyed, the more points he received. Further, if he was fortunate in finding common barberries he was awarded for each planting 15 additional points. He also received the bronze medal awarded by the Conference for the Prevention of Grain Rust, Minneapolis, Minnesota. And too, a certificate of award, signed by the Governor of the State, presented to the scout upon the finding of a planting of barberries enrolled him as a life member in the National Rust Busters Club.

In addition to the awards mentioned, a certain amount of recognition and publicity was given the students who revealed common barberries.

#### Results Thus Far

A total of 12 bushes and 258 seedlings consisting of four plantings was found and destroyed during the course of time the barberry project was carried on in Sioux Falls.

The city of Sioux Falls covers an area of approximately 800 marked blocks besides additional parks and areas not divided into blocks. During the course of the intensive survey by the general science boys and girls, a total of 50 blocks was completed. Students were engaged actively only about three weeks and results indicate that approximately 6 per cent of the marked area received the student survey.

A total of four medals and four certificates of membership in the National Rust Busters Club was awarded to four boys for their services in finding and reporting common barberries. The names of the boys who received the awards are: Keith L. Bond, Dale E. Hvistendahl, Donald N. Hegstrum, and Melroy A. C. Helberg.

#### Cost of Project

In preparation of the project and during the time the students were actively engaged, the writer made occasional trips from the official station, Brookings, to Sioux Falls. The cost of transportation, salary, and per diem for this purpose amounted to approximately \$44.55. Three city maps were purchased amounting to \$1.05. The total expenditure was \$45.60. The total cost to the Government per planting was \$11.40 and the total cost per bush was \$3.80. Including seedlings the cost was reduced to 16¢ per barberry.

The project plan of eradication of common barberries has been mentioned to some of the other science teachers in South Dakota cities

and towns smaller than the city of Sioux Falls. Among these are Aberdeen, Huron, and Madison. The teachers interviewed were quite enthusiastic over the results obtained through Mr. Bissell's project plan. Their assistance would greatly strengthen educational work and would thoroughly familiarize the members of their classes with the barberry program in general. Furthermore, by employing the method of survey used in Sioux Falls, common barberries possibly growing in the cities would quite certainly be found.

#### Proposed Future School-Folk Survey

Results obtained thus far indicate that many remaining barberries are quite likely to be found by students. These students not only aid largely in shortening the reign of common barberry but also they acquire a host of worth while information pertaining to plant life in general. In view of these aspects it is planned that such a survey may be carried to completion in Sioux Falls and also in several other cities and districts in South Dakota. Extension of the project, of course, depends on the school officials and the enthusiasm and interest exhibited by the ones on whom the burden falls, namely, the teachers and students.

#### Information to be Retained

According to the project system enthusiasts, students acquire an abundance of information on their own initiative. Such experiences and methods tend to stay with the students indefinitely.

Barberry eradication and black stem rust material was presented in the classroom and the information was constantly brought back to their minds as they search for barberries. This type of educational work should remain in their store of knowledge for some time to come.

#### Summary

1. Educational work merits recognition by virtue of the barberry locations revealed through this type of survey; the length of the life of the eradication campaign is thereby shortened.
2. The project system in science classes offers a place for barberry eradication work.
3. Students receive awards for their services, such as, medals, certificates, and points for credit.

4. In Sioux Falls the students enrolled in Mr. Bissell's project program located 12 bushes and 258 seedlings in a total of 4 plantings.
5. Fifty of the approximately 800 blocks were surveyed during May.
6. The total cost to the Government per planting amounted to \$11.40.
7. The project system may lend itself to the extension of this type of barberry survey in several other cities of South Dakota.

### INTENSIVE EDUCATIONAL WORK IN IOWA

By D. R. Shophord, Barberry Eradication Leader

An attempt was made in Linn County last spring to locate common barberries through informational work with the rural schools. We have large numbers of barberries in eastern Iowa in counties that we will be unable to work for some time, consequently we feel the need of a means of locating areas of escaped fruiting bushes. The results obtained from this project indicated that the rural school pupils can be of great service to our campaign.

#### Preliminary Arrangements

The preliminary arrangements for our project were made by the Leader about a month before we began the work. The project was outlined to the County Superintendent of Schools with the idea of selling her our work as well as showing the benefits of this project to the school pupils. The enthusiasm with which the teachers of the county receive the project will depend on the enthusiasm with which the superintendent accepts it. Thus, this preliminary set up is very important.

#### County Agent Contact

After definite arrangements had been made to visit the rural schools, the Leader called on the County Agricultural Agent and informed him of the nature of the project. Although the county agent took no active part in this work, he was asked many questions by farmers throughout the county after the children began talking barberry eradication around the homes. The county agent arranged for our informational man to talk at several 4-H Club and Farm Bureau meetings on Saturdays and in the evenings.

#### Letters to Teachers

Each rural school teacher was sent a letter previous to our visit to the school. This served as a means of introducing our work to each

teacher. This letter was sent from the State Office. I would suggest that a similar letter coming from the Office of the Superintendent of Schools would aid materially in introducing our man. This letter, of course, is not necessary if the project has been explained at a County Institute or some other type of gathering.

#### First Visit to Schools

When our agent arrived in the county he again made contacts with the County Superintendent of Schools and the County Agricultural Agent. Through the County Superintendent's Office he usually obtained the location of all the rural schools and marked each on a map of the county. It is a good plan to have the Superintendent outline the best routes to travel in getting to these schools so that no time will be lost because of poor roads.

The agent visited on an average of eight rural schools each day. Upon his arrival he would introduce himself and ask permission of the teacher to talk to the pupils. In most all cases the teacher recognized the car and knew who he was because of having received the letter. The teacher allowed the agent to talk to the pupils as soon as he arrived.

An illustrated chart talk lasting about 20 minutes was given at each school. The charts were of the cartoon type, each cartoon telling a simple story of some phase of our work. The cartoons were simple enough so that the first graders could grasp the story and still not so elementary that the eighth graders could not be interested. The agent tried to accomplish three things from his talk.

1. To explain that the barberry was a harmful bush and that it should be reported.

2. In a very simple way he tried to show why this shrub is responsible for the grain rust.

3. To instill in these pupils the desire to help their State and Nation by looking for and reporting these rust spreaders.

As a special incentive to the pupils he explained the Rust Busters Club membership to them and also the award in case a property is reported. He made it clear that they must learn about this bush before they can become Rust Busters. They are also asked to look for these bushes in their communities. In most cases the school was divided into two groups, each with a leader. These groups competed with each other to see which one could find the greater number of bushes. Usually the groups were given names, as the "Reds",

the "Whites", the "Bears", or the "Foxes", names selected by the pupils. The pupils were asked to bring a sample of their bushes to the teacher who would keep them until the agent would return. The agent promised to return in two weeks, at which time he would identify their bushes and organize them into a Rust Busters Club.

#### Second Visit to Schools

We have felt the need of a definite follow-up of our educational work in Iowa so as to have a measuring stick of the results obtained. Consequently we planned a second visit to each of these rural schools. The pupils, knowing that the agent was going to return, made a special effort to study the material and also to look for bushes in their community. When the agent returned to the school he examined the specimens that had been brought in by the pupils. The pupils were questioned on the subject matter left and on the talk that had been presented at the first visit. If the agent was satisfied that the material had been studied, and the teacher vouched for her pupils, the group would be organized into a local Rust Busters Club. Each pupil was presented with a button as an index to this membership. Any reported barberries were looked up by the agent on Saturdays and after four o'clock and the medals were presented after the reports had been verified.

A president was elected to each club and this officer was to make reports to the agent at various intervals as to the happenings of his group. This gave us an opportunity to keep in touch with these schools and to urge the continued search for bushes. All the club presidents wrote at least one letter and some have written several times. The letters indicate that the pupils are still doing some thinking in terms of barberry eradication.

#### Statistical Information

|                                       |       |
|---------------------------------------|-------|
| Number of schools visited             | 136   |
| Number of pupils in these schools     | 1,607 |
| Number of teachers                    | 143   |
| Number of properties reported to date | 39    |
| Number of bushes found to date        | 2,379 |

#### Cost of Project

|              |          |
|--------------|----------|
| First visit  | \$172.87 |
| Second visit | 120.12   |

#### Number of man days

|                   |    |
|-------------------|----|
| Barberry Leader   | 3  |
| Special assistant | 31 |

Value of project to the schools

1. Motivates special phase of agriculture.
2. Serves as special project for entire group.

Value of project to our campaign

1. Gives us an opportunity to teach the necessity for our work.
2. Builds up future cooperating personnel.
3. Serves as indirect means of reaching adult farm people.
4. Serves as a means of locating many barberries.

Conclusion

A project such as this can be made especially valuable to our work and of a distinct educational value to the rural schools of Iowa. The project motivates a special phase of agriculture for the pupils of the rural schools. While they are learning how to control a serious plant disease they are also aiding in the control work.

We must avoid any possibility of our project becoming one of pure propaganda. It has many educational possibilities so that with a little care the above can be prevented. Educators of today are outwardly opposed to introducing anything into the schools that has no distinct educational value.

EASTERN REGION

Ohio - 8 East Broad St., Columbus - Harry Atwood

The month of September was an interesting one for our field men. The crews working in Shelby County located and destroyed approximately 2,500 barberry bushes and 3,000 seedlings on 21 properties. This area of escaped bushes extended for a distance of 2 square miles or more and is near the site of an old abandoned nursery which at one time had a large planting of common barberry. It is thought that this is the origin of the bushes.

On October 7 the survey was completed in the city of Sidney. Common barberry bushes were found and destroyed on 17 properties in this city which is the county seat of Shelby County and has a population of 9,300.

Since September 26, four agents have been conducting intensive second survey in Shelby County. The survey will continue as late as the weather will permit.

Our informational activities during the past year brought to this office many leads of barberry locations. Some of these leads were reported to our attendants in charge of demonstrations at the State Fair, county fairs, Farmers' Week, community picnics, etc.; some were obtained as a result of our posters and plant displays in public buildings during the course of the regular systematic survey; others were received as a result of our informational activities in the schools and colleges of the State. We also receive leads from State nursery inspectors, county agents, and former barberry men.

The most authentic leads received are from former agents, teachers, of botany in our colleges, and Smith-Hughes teachers in our public schools. Leads received at various barberry demonstrations are apt to be less authentic.

On August 17 two of our field men were assigned the task of making a check on the leads which had accumulated in our office for the purpose of recording and destroying all barberries found. This work continued until September 26 at which time the men resigned to return to Ohio State University to continue their studies.

As a result of this investigation approximately 1,400 common barberry bushes and more than 3,000 seedlings were destroyed on 84 properties in 32 counties of the State. Escaped barberries were destroyed on 26 of these properties. Seventy-five per cent of the leads investigated proved to be common barberry.

We have approximately 25 authentic barberry leads yet to be investigated. (Oct. 10)

#### Illinois - Post Office Building, Urbana - Robert W. Bills

The field force was reduced to 5 Federal and 5 State men by resignations on October 10. Mr. Weber resigned on September 30. He is now employed as photographer for the Department of Justice, and is located at Chicago.

After awarding a N. R. B. C. medal to a little school girl in Rock Island County, letters and twigs from barberry bushes were mailed to the office by six of her classmates. The bushes were found on 4 different properties, and consequently not all of the children are eligible to receive the service medal, but judging from the activities displayed thus far, Illinois may soon have a 100 per cent school to rival Minnesota's record.

The field men working in Kane County have been finding unusual interest shown by the farmers. Stem rust has been severe near Kaneville, particularly this year. They found no bushes in the township until Friday when a planted bush was found at a farmhouse and one was found in Kaneville.

The field season will come to a close the last week in October. The annual supper will be held in Urbana when the last men come in. (Oct. 10)

Michigan - Michigan State College, East Lansing - Francis B. Powers

Two new areas of escaped barberries were located this week by the squad in Van Buren County. It is estimated that approximately four tons of salt will be needed to eradicate them.

Mr. George S. McIntyre is speaking to rural school groups in Jackson County. Both teachers and pupils are enthusiastic about earning N. R. B. C. medals.

The second annual banquet of barberry workers in Michigan was held Saturday night, October 3, at the Michigan State Union. The guest speakers were Mr. B. A. Walpole, Associate Professor of Agricultural Education, Michigan State College, and Dr. E. A. Bessey, Dean of the Graduate School and Professor of Botany, Michigan State College. Mr. Walpole commended the barberry agents for taking a stand against barberry, a menace to humanity, and compared it with social menaces that they could help eradicate. Dr. Bessey spoke briefly concerning associations and friendships on barberry work and in college. Each squad either presented a stunt or was represented by a brief talk by the squad leader.

On Thursday, October 8, the Leader was surprised by a visitor, his old friend Fred Rasmussen, with whom he formerly salted barberries in Minnesota. Fred was en route to Ontario where he is studying veterinary surgery. He was a barberry eradication agent in Minnesota this summer. (Oct. 8)

Wisconsin - State Capitol Annex, Madison - Vern O. Taylor

The crew of laborers working in Iowa County has been hampered by wet weather during the month of October and it is gratifying to know that they are paid only when they work. This squad of local men have scouted in all types of territory this summer and have proven themselves the equal of appointed agents in all kinds of scouting. They are anxious to work late this fall and their interest does not seem to wane as is often the case with college men. The conditions for scouting are ideal, when the sun is shining, and the work in this

area is progressing faster than at any time this season in spite of the inclement weather. Mr. Harold Cate, who is in charge of the work, states that the area will be finished before the season closes November 1.

A barberry demonstration was put up at the Dodge County Fair held the first week in October. This fair is hailed as the largest county fair in the State but it was rather a disappointment from the standpoint of crop exhibits. Only one lead was obtained as a result of the work although the booth was the main attraction in the agricultural building.

The work of checking leads has been started in Wisconsin and from all indications it is going to materialize into a man-sized task. In a check of three locations a total of 15 bushes was found and a great number of them were fruiting. A map of the State, so constructed as to show the number and location of all leads in the files, disclosed a total of 140 properties suspected of having bushes. Of this number 70 are known to be authentic and they are widely distributed over the State. (Oct. 15)

#### WESTERN REGION

##### Minnesota - University Farm, St. Paul - Leonard W. Melander

On September 26 we completed the intensive school campaign of Blue Earth County. There apparently was a great deal of enthusiasm aroused among the school children, because we have received a comparatively large number of barberry specimens. This makes a total of nine counties which have been completed in this intensive school campaign. On Tuesday, September 29, we started Chippewa County. Here the county superintendent had everything arranged. All the school teachers were notified of the coming of the barberry men and she also had the itineraries arranged so that the most schools could be covered in the shortest possible time. By emphasizing the educational value of this campaign we receive very fine cooperation from the school officials. Of course, we make all the school children members of the National Rust-Busters Club.

On October 6 we started eradication activities in the areas of escaped barberries near Red Wing. We are using eight day laborers directly supervised by two regular field men.

Due to the unemployment conditions, getting day laborers was easy. With the aid of the emergency employment bureau of the Red Wing Chamber of Commerce we secured eight apparently good men. They seemed anxious to make good. They paid close attention to instructions and in a very short time learned to treat bushes properly. (Oct. 7)

Iowa - Morrill Hall, Iowa State College, Ames - D. R. Shepherd

The intensive informational work has been started in Benton County and from all indications the fall of the year is going to be a satisfactory time to do this type of work. Mr. Brown reports that the teachers have been very willing to have him talk to their pupils and the pupils seem very much interested in the National Rust Busters Club. He reports that one of the Linn County Rust Busters has recently sent him a specimen of the common barberry so that Linn County now has 40 boys and girls who have won medals. This makes a total of 48 properties on which bushes have been found as a result of our informational efforts.

The Barberry Leader has recently returned from the Waterloo Dairy Cattle Congress where he was in charge of the Iowa Barberry Eradication exhibit. The theme of our exhibit this year was "Why Eradicate Iowa Barberries." Supplementing a large panel in the background were four panels showing four definite reasons why Iowa barberries should be eradicated. Mr. George's transparency box showing the rust spores spreading from barberries to near-by grain and grasses was used as a centerpiece. This same exhibit was shown at the large county fair at Spencer. (Oct. 15)

District No. 1 - Post Office Building, Fargo, N. Dak. - G. C. Mayoue

Montana and North Dakota - It was November 2, 1804 when the Lewis and Clark expedition banked its slow river barges on shifting Missouri clay and prepared to winter among the friendly Mandan Indians. On this approximate site now stands the city of Bismarck, capital of North Dakota and seat of Burleigh County. Six miles across the tawny river lies Mandan, Morton County seat, named for the peaceful Indians whose Shoshonee born Sacagawea (Bird Woman) led the explorers west across the Rockies. Joining Morton to the southwest and extending to the "Bad Lands" in Grant County, whose seat, Carson, numbers 250 people.

Into each of these areas two weeks ago went a barberry agent to prepare the way not for more people but for better grains. To find the many small schools hidden in the swells of the western prairie they must travel side roads that dwindle to mere tracks in some places. Often forced to depend upon trial and error alone, the agent follows a trail only to find that it evaporates into blue sky from the point of a hill. But once he reaches his school, the agent finds a welcome that is real.

Typical of the spirit of these children whose feet meet sod still virgin is one letter found recently among those from newly

organized Rust Buster Clubs:

"Gentlemen:

"This is to apprise you that at our first Rust Busters Club on September 28, 1931, Ralph Swanson was elected President of our Club, and the undersigned was elected secretary.

"We are whole heartedly in earnest in our purpose to cooperate in the Eradication of the rust breeding barberry.

"However, there is in the folder left by Mr. Mayoue with each pupil of our school the statement that the first law passed against the bush in the U. S. was in May 1726. Of course the statement is a glaring mistake. Because that was 63 years before there was any United States of America.

"We children of America naturally expect greater accuracy in the literature sent to us from our State Colleges and U. S. Government Department of Agriculture.

"As a matter of curiosity we would appreciate further explanation of when and how the rust spores were captured  $1\frac{1}{2}$  miles high. We are not challenging the statement but crave more information on this interesting matter.

Respectfully,

Edwin E. Robidou."

To aid in beginning the informational work in Fergus and Judith Basin Counties, District Leader Mayoue left his headquarters October 6 for a two weeks stay in Montana. He expects to spend most of his time in Montana on actual supervision of the school work. (J. O. Roberts, Oct. 9)

#### Travel to Schools

In a recent letter Mr. E. A. Lungren makes the following statement:

"In carrying on our intensive informational activities with the rural schools, we find that in some

cases it is convenient for us to travel with some of the county officials who are making the same schools we are. In cooperating with the folks over in Greeley last week Mr. Shepherd travelled with one of the county officials without any expense to us, and made from three to five schools a day. Where this practice can be done it appears to me that it is not only economical but enables us to locate the schools more readily, and do our work probably more efficiently and effectively."

Mr. Lungren feels that such travel, when carried on so as to not interfere with either our own work or the work of the school official concerned, may at times be quite advantageous. This would seem to be true in certain individual cases provided care is taken to avoid imposing on our cooperators. There may also be times when it is mutually advantageous for the school official to ride with our representative when on his regular work.

